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(71)出願人 000005832

松下电工株式会社

大阪府門真市大字門真1048番地

(72)発明者 成瀬 駿彦

大阪府門真市大字門真1048番地 松下电工

株式会社内

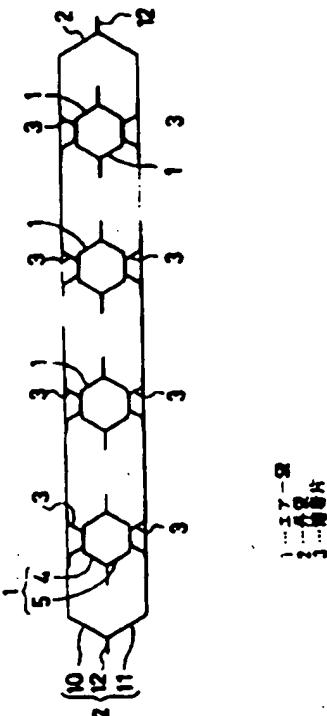
(74)代理人 弁理士 宮井 碩夫

(54)【発明の名称】 エアーマット

(57)【要約】

【目的】加工性を向上できるとともにエアーマットの密閉性を向上することができるエアーマットを提供する。

【構成】複数のエアーバッグ1の各々に接着片3を設け、エアーバッグ1を収納する外袋2の内面に接着片3を接着している。



【特許請求の範囲】

【請求項1】複数のエアー袋の各々に溶着片を設け、前記エアー袋を収納する外袋の内面に前記溶着片を溶着したエアーマット。

【請求項2】前記エアー袋は一対の袋片を接合することにより形成され、前記溶着片は前記袋片の縁部を延出することにより形成されている請求項1記載のエアーマット。

【発明の詳細な説明】

【0001】

【産業上の利用分野】この発明は、寝具やマッサージ器等に適用されるエアーマットに関するものである。

【0002】

【従来の技術】従来例を第6図ないし第8図に示す。すなわち、このエアーマットは、複数のエアー袋50と、これらのエアー袋50を収納した外袋51とを備え、エアー袋51にそれぞれ供給口52を接続している。このエアーマットは、第8図に示すように一対の外袋用シート53、54の内側にエアー袋50の袋片55、56を溶着線57でそれぞれ溶着し、一対の袋片55、56の両側58を溶着して各エアー袋50を形成し、さらに一対の外袋用シート53、54の両側縁59を溶着することにより製造される。

【0003】

【発明が解決しようとする課題】しかし、このエアーマットは、外袋用シート53、54を対向させてその内側の袋片55、56の両側58を溶着する必要があるため加工が悪く、またエアー袋50の密閉性の確認がエアーマットの完成後でないとできないという欠点があった。

【0004】したがって、この発明の目的は、加工性を向上できることとともにエアー袋の密閉性を向上することができるエアーマットを提供することである。

【0005】

【課題を解決するための手段】請求項1のエアーマットは、複数のエアー袋の各々に溶着片を設け、前記エアー袋を収納する外袋の内面に前記溶着片を溶着したものである。請求項2のエアーマットは、請求項1において、前記エアー袋は一対の袋片の縁部を接合することにより形成され、前記溶着片は前記袋片の縁部を延出することにより形成されている。

【0006】

【作用】請求項1のエアーマットによれば、複数のエアー袋を外袋に収納し、各エアー袋の溶着片を外袋の内面に溶着することにより製造されるので、従来例と比較して加工が容易になるとともに、エアー袋の密閉性が外袋に収納する前から明確であるので品質の向上を図ることができる。さらに従来例と比較して、エアー袋を外袋に溶着する部分が外袋の形状に左右されないので複雑な形状の外袋に対応することができる。

【0007】請求項2のエアーマットによれば、請求項1において前記エアー袋は一対の袋片を接合することにより形成され、前記溶着片は前記袋片の縁部を延出することにより形成されているため、請求項1の作用のほか、各エアー袋に別部品の溶着片を設ける場合と比較して加工性がよくなる。

【0008】

【実施例】この発明の第1の実施例を第1図および第2図により説明する。すなわち、このエアーマットは、複数のエアー袋1と、外袋2とを有する。複数のエアー袋1はそれぞれ溶着片3を設けているが、エアー袋1は一対の袋片4、5の側縁6を溶着して筒状の袋を形成している。また溶着片3は中間部7を各袋片4、5の外面に溶着している。

【0009】外袋2はエアー袋1を収納するとともに溶着片3により内面に溶着しているが、外袋2は一対の外袋用シート10、11からなり、その両側縁12を溶着して袋状に形成している。また溶着片3の両端8を外袋用シート10、11に溶着している。この実施例は、袋片4、5を溶着してエアー袋1を形成するとともに溶着片3を溶着し、つぎに外袋用シート10、11に溶着片3を接合してエアー袋1を取付け、最後に外袋用シート10、11の両側縁12を溶着する。

【0010】この実施例によれば、複数のエアー袋1を外袋2に収納し、各エアー袋1の溶着片3を外袋2の内面に溶着することにより製造されるので、従来例と比較して加工が容易になるとともに、エアー袋1の密閉性が外袋2に収納する前から明確であるので品質の向上を図ることができる。さらに従来例と比較して、エアー袋1を外袋2に溶着する部分が外袋2の形状に左右されないので複雑な形状の外袋2に対応することができる。

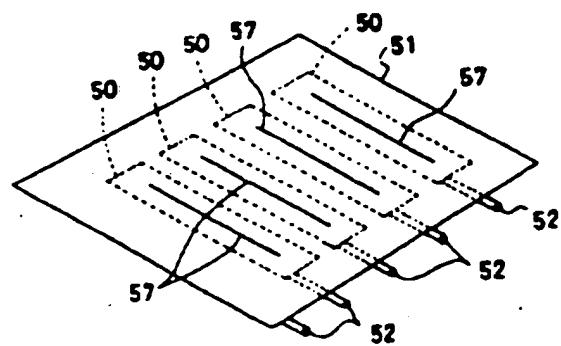
【0011】第3図はこの実施例の変形例であり、溶着片3をリング状にして両端15を溶着するとともに溶着部14によりエアー袋1に溶着し、溶着部13により外袋2に溶着している。この実施例はあらかじめ溶着片3をリング状に形成しており、外袋2への溶着箇所が1個減るのでさらに加工性がよくなる。この発明の第2の実施例を第4図により説明する。すなわち、このエアーマットは、袋片4、5の両側縁の内側寄りに溶着部16を形成することによりエアー袋1を形成し、その両側縁を溶着片3として延長させ、溶着片3の各先端部17を外袋用シート10、11に溶着したものである。その他は、第1の実施例と同様である。

【0012】この実施例によれば、溶着片3をエアー袋1に溶着する必要がないので、第1の実施例よりも加工性がよい。第5図はこの実施例の変形例で、溶着片3の先端部17を合わせて外袋2に溶着したものであり、溶着工程が減るのでさらに加工性が向上する。

【0013】

【発明の効果】請求項1のエアーマットは、複数のエアーマットに対応することができる。

〔図6〕



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AIR MAT

Inventor:

Haruhiko Naruse
Matsushita Electric Works, Ltd.
1048 Oaza Kadoma, Kadoma-shi,
Osaka-fu

Applicant:

000005832
Matsushita Electric Works, Ltd.
1048 Oaza Kadoma, Kadoma-shi,
Osaka-fu

Agent:

Akio Miyai

[There are no amendments to this patent.]

Abstract

Objective

To provide an air mat capable of improving the workability and sealing performance of air bags.

Constitution

Welding pieces (3) are provided to each of plural air bags (1) and welding pieces (3) are welded to the inner surface of outer bag (2) for storing air bags (1).

//insert a, p. 1//

Legend:

1	Air bag
2	Outer bag
3	Welding piece

Claims

1. An air mat, wherein welding pieces are provided to each of plural air bags and said welding pieces are welded to the inner surface of an outer bag for storing said air bags.
2. The air mat according to Claim 1, wherein said air bags are formed by joining a pair of bag pieces and said welding pieces are formed by extending the edge portions of said bag pieces.

Detailed explanation of the invention

[0001]

Industrial application field

This invention relates to an air mat applied to beds, massaging machines, etc.

[0002]

Prior art

A conventional example is shown in Figures 6 through 8. Namely, this air mat is provided with plural air bags (50) and outer bag (51) for storing these air bags (50), and feed port (52) is connected to each air bag (51). This air mat is manufactured by welding bag pieces (55) and (56) of respective air bag (50) on the inside of a pair of outer bag sheets (53) and (54) at

welding line (57), forming each air bag (50) by welding both sides (58) of the pair of bag pieces (55) and (56), and welding two side edges (59) of the pair of outer bag sheets (53) and (54).

[0003]

Problems to be solved by the invention

However, this air mat has disadvantageous poor workability due to the necessity of opposing outer bag sheets (53) and (54) and welding both sides (58) of the bag pieces (55) and (56) on the inside and not being able to check the sealing performance of air bags (50) after completing the manufacture of the air mat.

[0004]

Therefore, the objective of this invention is to provide an air mat capable of improving the workability and sealing performance of the air bags.

[0005]

Means to solve the problems

The air mat in Claim 1 provides welding pieces to each of plural air bags and welds said welding pieces to the inner surface of an outer bag for storing said air bags. The air mat in Claim 2 forms said air bags in Claim 1 by joining the edge portions of a pair of bag pieces and forms said welding pieces by extending the edge portions of said bag pieces.

[0006]

Operation of the invention

According to Claim 1, an air bag is manufactured by storing plural air bags in an outer bag and welding the welding pieces of each air bag to the inner surface of the outer bag and, along with the work becoming easy compared to the conventional example, improvement in the quality can be achieved since the sealing performance of the air bags is known before storing in the outer bag. Furthermore, when compared with the conventional example, the section for welding the air bags to the outer bag is not influenced by the shape of the outer bag so is possible to correspond to an outer bag with a complicated shape.

[0007]

According to the air mat in Claim 2, said air bags in Claim 1 are formed by joining a pair of bag pieces and said welding pieces are formed by extending the edge portions of said bag pieces so in addition to the operation in Claim 1, workability becomes favorable compared to a case of providing welding pieces which are separate parts to each air bag.

[0008]

Embodiments of the invention

The first embodiment of this invention will be described according to Figure 1 and Figure 2. Namely, this air mat has plural air bags (1) and outer bag (2). Plural air bags (1) respectively have welding pieces (3) and air bags (1) are formed into cylindrical bags by welding side edge portions (6) of a pair of bag pieces (4) and (5). Also, middle portions (7) of welding pieces (3) are welded to the outer surface of bag pieces (4) and (5).

[0009]

Outer bag (2) stores air bags (1) along with being welded at the inner surface according to welding pieces (3). Outer bag (2) is comprised of a pair of outer bag sheets (10) and (11) and is formed into a bag shape by welding the two side edges (12) thereof. Also, two ends (8) of welding pieces (3) are welded to outer bag sheets (10) and (11). In this embodiment, air bags (1) are formed by welding bag pieces (4) and (5), welding pieces (3) are welded [to said air bags], air bags (1) are attached [to outer bag sheets] by joining welding pieces (3) to outer bag sheets (10) and (11), then finally both side edges (12) of outer bag sheets (10) and (11) are welded.

[0010]

According to this embodiment, an air mat is manufactured by storing plural air bags (1) in outer bag (2) and welding welding pieces (3) of each air bag (1) to the inner surface of outer bag (2). Therefore, along with the work becoming easy compared to the conventional example, improvement in the quality can be achieved since the sealing performance of air bags (1) is known before storing in outer bag (2). Furthermore, when compared with the conventional example, the section for welding air bags (1) to outer bag (2) is not influenced by the shape of outer bag (2) so it is possible to correspond to an outer bag (2) with a complicated shape.

[0011]

Figure 3 is a modified form of the aforementioned embodiment. Welding piece (3) is formed into a ring shape, two ends (15) are welded, then said welding piece is welded to air bag (1) at welding part (14) and welded to outer bag (2) at welding part (13). In this embodiment, welding pieces (3) are formed into a ring shape beforehand and since the number of sections welded to outer bag (2) decreases by one section the workability improves even more. The second embodiment of this invention will be described according to Figure 4. Namely, this air mat forms air bags (1) by forming welding parts (16) towards the inside at the two side edges of bag pieces (4) and (5), extends these two side edges to compose welding pieces (3), and each

extreme end portion (17) of welding pieces (3) is welded to outer bag sheets (10) and (11). The remainder is the same as in the first embodiment.

[0012]

According to the second embodiment, it is not necessary to weld welding pieces (3) to air bag (1) so the workability is more favorable than in the first embodiment. Figure 5 is a modified embodiment of this embodiment. Extreme end portions (17) of welding pieces (3) are joined and then welded to outer bag (2) and thus the workability improves further since the number of welding processes decreases.

[0013]

Effect of the invention

The air mat in Claim 1 is manufactured by storing plural air bags in an outer bag and welding the welding pieces of each air bag to the inner surface of the outer bag so along with the work becoming easy compared to the conventional example, improvement in the quality can be achieved since the sealing performance of the air bags are known before storing in the outer bag. Furthermore, when compared with the conventional example, the section for welding the air bags to the outer bag is not influenced by the shape of the outer bag so there is an effect of being able to correspond to an outer bag with a complicated shape.

[0014]

In the air mat of Claim 2, said air bags in Claim 1 are formed by joining a pair of bag pieces and said welding pieces are formed by extending the edge portions of said bag pieces so in addition to the effects in Claim 1, the workability becomes favorable compared to a case of providing welding pieces as separate parts to each air bag.

Brief description of the drawings

Figure 1 is a schematic cross-sectional view of the first embodiment in this invention.

Figure 2 is a partially enlarged cross-sectional view thereof.

Figure 3 is a cross-sectional view of a modified embodiment.

Figure 4 is a schematic cross-sectional view of the second embodiment in this invention.

Figure 5 is a cross-sectional view of a modified embodiment.

Figure 6 is an oblique view of a conventional example.

Figure 7 is a schematic cross-sectional view thereof.

Figure 8 is a partial cross-sectional view of the manufacturing process.

Description of the reference numerals

(1)...air bag, (2)...outer bag, (3)...welding piece.

Figure 1

Legend:

1	Air bag
2	Outer bag
3	Welding piece

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8